Table 1: Summary of Data and Potential Exposure Scenarios				
Description	**Locations**	**Data Results[1]**	**Potential Impacts/Exposure Scenarios**	**Data Source(s)**
Lead Additive Area	Lead Additive Area	Lead 43,200 – 55,049 mg/kg <u>Perched Water:</u> 2-methylphenol $1.5x10^6$ µg/l Phenol 270,000 µg/l 2,4 dimethylphenol $1.3x10^6$ µg/l Lead >752 µg/l Benzene 2400 µg/l	Sand Creek (direct discharge/migration to surface water/sediment) Ecological and Human Receptors (direct exposure) Human Receptors (indoor air)	RI Field Data, 2016 LMS, 2016 Removal Assessment, 2016 ESI Wilcox Oil, 1997 ESI Wilcox/Lorraine 2011 Lorraine Refinery SI, 2009 ESI Wilcox Oil, 2012
Tank Waste	Lorraine Process Area Tank 1 Tank 3 NTF-1 Tank 10 Tank 11 Tank 12 Pit 1	TPH 23,200 - 875,000 mg/kg Lead 513 – 3,660 mg/kg total xylenes 0.28 – 0.45 mg/kg toluene 0.27 mg/kg **PAHs** Benzo(a)anthracene 0.76 - 12 mg/kg Benzo(a)pyrene 1.2 - 12 mg/kg Benzo(b)fluoranthene 2.4 - 20 mg/kg Benzo(k)fluoranthene 7.5 mg/kg Chrysene 13 - 37 mg/kg Fluoranthene 2.5 - 17 mg/kg Indeno(1,2,3-cd)pyrene 3.1 – 4.4 mg/kg phenanthrene 27 - 520 mg/kg pyrene 2.1 - 230 mg/kg 2-methylnaphthalene 49 - 1,400 mg/kg		

1 This column is not all inclusive. This is a limited summary of detected contaminants, specifically listing those with the highest concentrations.

Abbreviations: TPH=total petroleum hydrocarbon mg/kg=milligram per kilogram µg/l=micrograms per liter
ESI=Expanded Site Investigation SI=Site Investigation ERT=Environmental Response Team
RI=rememdial investigation PAHs=polycyclic aromatic hydrocarbons LMS= Lockheed Martin SERAS

Table 2: Passive Soil Gas and Indoor Air/Sub-slab Data

Passive Soil Gas Results	
COMPOUNDS	Result: ng
Benzene	8652
Toluene	2,682
Ethylbenzene	8,453
p & m-Xylene	15,656
o-Xylene	6,326
Naphthalene	2,145
2-Methylnaphthalene	10,027

Results are nanograms (ng). There are no screening numbers for mass comparison. Data presented are the highest recorded results.

Indoor Air/Sub-slab		
Analyte	Result: ($\mu g/m^3$)[1]	Health Based Screening Level ($\mu g/m^3$)[2]
Chloroform	0.93	0.12
1,4-Dichlorobenzene	1.08	0.26
Benzene	5.57	0.36
Ethylbenzene	1.44	1.1
1,3-Butadiene	11.7	0.094
Trichlorofluoromethane	43.4	--

(--): no health based screening number available.
1-Results are micrograms per cubic meter ($\mu g/m^3$). Data presented are the highest recorded results.
2-Regional Human Health Medium Specific-Screening Tables, June 2017

Table 4: Areas of Remediation – Estimated Volume and Cost		
Area Name	**Volume Estimated (cubic yards)**	**Estimated Cost**
Lorraine Waste	952	$170,914
Lead Additive Area	6,532	$989,032
Tank 1	3,322	$505,318
Tank 3	3,608	$544,806
NTF-1	817	$153,306
Tank 10	9,902	$1,427,334
Tank 11	431	$100,133
Tank 12	4,788	$712,708
Pit 1	4,269	$643,018
Total	34,621 (5.5 Acres)	$5,246,569.00

Source: Remedial Action Cost Engineering and Requirements System, Version 11.2.16.0, software used to estimate cost.

Table 3: Comparison of site data to Health Based Screening Levels[1]				
	Contaminant	**Data Results (mg/kg)**	**Health Based Screening Level (mg/kg)**	**Health Based Screening Level Basis**
Lead Additive Area	Lead	55,049	200 - 400	Protection of blood lead levels in children
Tank Waste	Benzo(a)anthracene	12	1.1	Residential Cancer Screening Number at 10-6 Risk
	Benzo(a)pyrene	12	0.11	Residential Cancer Screening Number at 10-6 Risk
	Benzo(b)fluoranthene	20	1.1	Residential Cancer Screening Number at 10-6 Risk
	Indeno(1,2,3-cd)pyrene	4.4	1.1	Residential Cancer Screening Number at 10-6 Risk
	2-methylnaphthalene	1400	240	Residential Non-cancer Screening Number at Hazard Index=1
	Naphthalene	14	3.8	Residential Cancer Screening Number at 10-6 Risk
	Perched Water (result of migration from waste material)			
		Data Results (µg/kg)	**Health Based Screening number (µg/kg)**	**Health Based Screening Number Basis**
	2-methylphenol	$1.5x10^6$	930	Residential Non-Cancer Screening Number at Hazard Index=1 for Drinking Water
	Phenol	270,000	5800	Residential Non-Cancer Screening Number at Hazard Index=1 for Drinking Water
	2,4 dimethylphenol	$1.3x10^6$	360	Residential Non-Cancer Screening Number at Hazard Index=1 for Drinking Water
	Lead	>752	15	Action Level for Drinking Water
	Benzene	2400	5	Maximum Contaminant Level for Drinking Water

1- Regional Human Health Medium Specific-Screening Tables, June 2017
mg/kg=milligram per kilogram µg/l=micrograms per liter Data presented are the highest recorded results.

Table 5: Source Material Health Based Target Levels[1]			
Contaminant	**Data Results (mg/kg)**	**Health Based Target Level (mg/kg)**	**Health Based Target Level Basis**
Lead	55,049	200 - 400	Protection of blood lead levels in children

Table 5: Source Material Health Based Target Levels[1]			
Contaminant	**Data Results (mg/kg)**	**Health Based Target Level (mg/kg)**	**Health Based Target Level Basis**
Benzo(a)pyrene	12	0.11	Residential Cancer Screening Number at 10-6 Risk
1- Regional Human Health Medium Specific-Screening Tables, June 2017 mg/kg=milligram per kilogram			